Hydraulic and Hydrologic Considerations in Planning Course

CORPS CIVIL WORKS PROJECT PURPOSES

Chuck Shadie, MVD

Objectives

- Review the various Corps Civil Works Project Purposes.
- Review the role of the H&H engineer to the study team process.

References

- **ER1105-2-100, Planning Guidance Notebook, 22 April 2000**
  - **Chapter 3 – Corps Civil Works Missions**
- **ER 1105-2-101, Risk Analysis for Flood Damage Reduction Studies, 3 January 2006**
- **EC 1105-2-411, Watershed Plans, 15 January 2010**

CIVIL WORKS

High Priority Objectives Defined by the Executive Branch

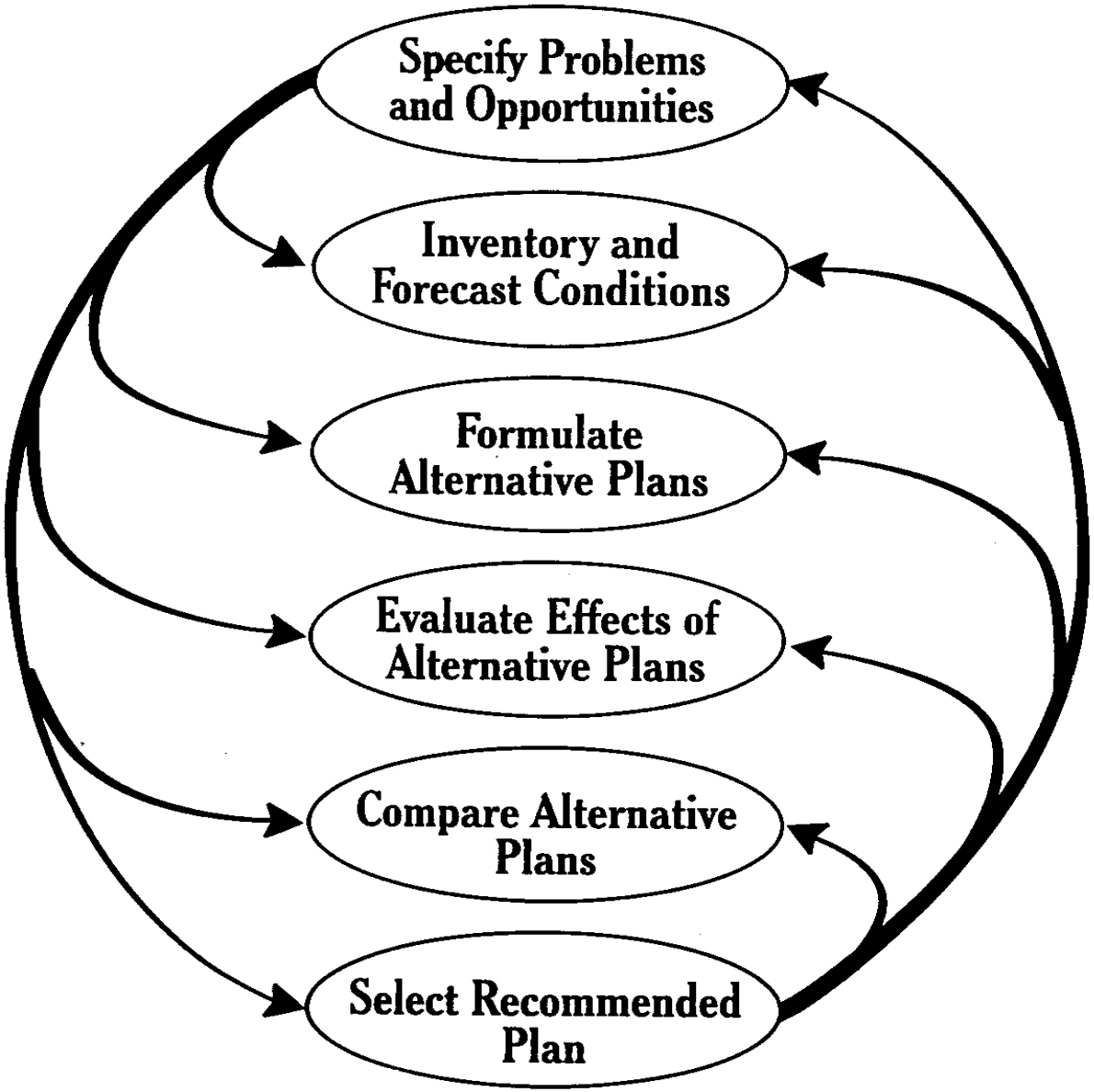
OMB Budget Guidance EC 11-2-187,
FY 07, 29 APRIL 05

Corps Civil Works Project Purposes

- Navigation
- Flood Risk Mgmt
  - Flood Damage Reduction
  - Hurricane & Storm Damage Reduction
- Ecosystem Restoration

- Hydropower
- Recreation
- Water Supply
- Multiple Purpose Studies
- Other Authorities
  - Continuing Authorities Program (CAP)
  - Review of Completed Projects -- Sect 216 of 1970 FCA
  - Planning Assistance to States (PAS) – Sect 22 of 1974 WRDA
  - Flood Mitigation & Riverine Restoration – Sect 212 of 1999 WRDA

PLANNING PROCESS



Navigation

Mel Price L&D – St. Louis, MO

Flood Risk Management

Comite River, LA - 1983

Galveston, TX

Ecosystem Restoration

Upper Mississippi River -- Minnesota

Hydropower

Recreation

Water Supply

Baldhill Dam – Ashtabula Lake near Valley City, ND

Multiple Purpose Studies

Watershed Plans

- **EC 1105-2-411, Watershed Plans, 15 Jan 2010**

- **Under the Watershed Approach the Corps will:**
  - **Work collaboratively with a broad range of stakeholders to help solve water resources problems in an integrated & sustainable manner**
  - **Use systems approaches to understand the connection between natural & man-made systems**
  - **Analyze water resources problems on larger geographic scales**
  - **Strive to achieve multiple goals & functions using water & related resources in a balanced manner**

H&H Analyses and Participation on Civil Works Studies

- Study/Project Objectives will determine much of the required H&H analyses.
- Scope and Schedule determine type of H&H analyses
- Common H&H task outline:
  - Data Collection & Review Past Studies
  - Hydrologic & Hydraulic Studies
  - Model Development
  - Determine Existing & Future-Without Conditions
  - Alternative Analyses & Plan Selection
  - Hydraulic Design
  - Reporting of Results

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